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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/855,893	05/15/2001	David J. Bon	T30321	1142

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EXAMINER

PEREZ DAPLE, AARON C

ART UNIT	PAPER NUMBER
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2154

DATE MAILED: 03/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/855,893	BON ET AL.	
	Examiner	Art Unit	
	Aaron C Perez-Daple	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28 and 29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Action is in response to RCE filed 10/28/04, which has been fully considered.
2. Claims 1-27 have been cancelled by Applicant.
3. New claims 28 and 29 are presented for examination.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, a plurality of bonders, each bonder having a calculating unit, a memory unit, an optical unit, and an adaptive compensator must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not

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accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: specifically the specification does not disclose a plurality of bonders, each bonder having a calculating unit, a memory unit, an optical unit, and an adaptive compensator. The specification further does not disclose storing a device program and a visual image file in the memory unit of each bonder.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. **Claims 28 and 29** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically the disclosure does not provide a description of plural bonders, each bonder having a calculating unit, a memory unit, an optical unit, and an

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adaptive compensator. The disclosure further does not describe storing a device program and a visual image file in the memory unit of each bonder. Although the disclosure does provide for a segmentator for grouping the action sites of the IC into segments, the disclosure further does not provide support for the term "a set of group segments" for performing the grouping. Applicant is required to use claim terminology which is consistent with the disclosure as originally filed.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. **Claims 28 and 29** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Because of the lack of correlation between elements recited in the claims and elements provided for in the disclosure, as detailed in the 112 first paragraph rejection above, it is difficult for the Examiner to ascertain precisely what is being claimed and the proper scope of the claims. Furthermore, it is unclear what is meant by the "set of group segments" recited in step (d) of claims 28 and 29, because it appears that this element actually performs the grouping. For the purpose of applying prior art, the Examiner interprets that "a set of group segments" merely refers to a group of action sites on the IC.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claims 28 and 29** are rejected under 35 U.S.C. 102(b) as being obvious over Kono (US 5,516,023) (hereinafter Kono).

12. As for claims 28 and 29, Kono discloses a system and method comprising:

- a. a bonder for bonding semiconductor chips (Fig. 8); each bonder having a calculating unit for manipulating data relating to a bonding operation (control unit 16, Fig. 8), a memory unit for storing data relating to the bonding operation (memory unit 15, Fig. 8), an optical unit for acquiring visual images relating to the bonding operation (image pickup system 8a, Fig. 8), and an adaptive compensator for controlling the bonding operation (col. 3, lines 1-16; col. 5, lines 5-18);
- b. a communication means for providing communication between the calculating unit, the memory unit, and the optical unit of a bonder, and for providing communication among bonders (inherent for transferring data between system elements; col. 3, lines 1-16);
- c. a semiconductor chip having a plurality of bondpads arranged on the semiconductor chip (Figs. 1 and 2; col. 1, lines 15-34);
- d. a set of group segments for grouping the plurality of bondpads of the semiconductor chip and the segments, stored in the memory unit of the bonders (Figs. 1 and 2; col. 2, line 56 – col. 3, line 13);

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- e. a device program including information related to the semiconductor chip and the segments, stored in the memory unit of the bonders (col. 2, lines 64-67; col. 6, lines 17-24);
- f. a visual-image file containing visual information of the segments acquired from the optical unit, stored in the memory unit of the bonder (col. 2, lines 59-67);
- g. corrective data generated in the calculating unit relating the device program and the visual information (col. 3, lines 13-16); and
- h. the adaptive compensator adaptive to receive the corrective data for controlling the bonding operation (col. 3, lines 13-16).

Kono does not specifically disclose that the system and method may comprise a plurality of bonders. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kono by using a plurality of bonders for the purpose of increasing production speed and volume.

Response to Arguments

13. Applicant's arguments with respect to claims 28 and 29 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron C Perez-Daple whose telephone number is (571) 272-3974. The examiner can normally be reached on 9am-5pm.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 3/22/05

Aaron Perez-Daple


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